Observations of Occultations of Stars by the Moon, and of Phenomena of Jupiter's Satellites, made at the Royal Observatory, Greenwich, in the Year 1893.

(Communicated by the Astronomer Royal.)

Occultations of Stars by the Moon.

Day.	Phenomenon.	Telescope.	Power.	Moon's limb.	Mean Solar Time of Observation. h m s	Observer.
1893 Feb. 26	Disapp. e Geminorum	Merz. Refractor	418	Dark	9 58 35·05	L.
Apr. 18	32 Tauri	Astrographic Equat.	225	,,	9 6 59·60	C. D.
18	32 Tauri	E. Equat.	55	,,	9 7 0·30	A. C.
18 (a)	B.D. + 22° No. 602	Astrographic Equat.	225	,,	8 57 32·95	C. D.
18 (b)	B.D. + 22° No. 606	,,	,,	,,	9 7 46·77	,,
19 (c)	B.D. + 25° No. 762	Altaz.	100	,,	8 13 (3·24)	H.
19	B.D. + 25° No. 762	Astrographic Equat.	225	,,	8 13 13·76	C. D.
19 (d)	W.B. (2) IV. 1,144	Altaz.	100	,,	8 39 35·08	H.
19	W.B. (2) IV. 1,144	Astrographic Equat.	120	,,	8 39 34·87	C. D.
19 (e)	W.B. (2) IV. 1,142	Altaz.	100	,,	8 43 46·88	H.
19	W.B. (2) IV. 1,142	Astrographic Equat.	120	,,	8 43 48·58	C. D.
20	B.D. + 27° No. 963 (1st *)	,,	,,	,,	7 56 11·02	,,
20 (f)	B.D. + 27° No. 964	,,	,,	,,	8 3 9·57	,,
20	B.D. + 27° No. 966	Merz. Refractor	418	,,	8 9 1·24	L.

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Day.	Phenomenon.	Telescope.	Power.	Moon's limb.	Mean Solar Time of Observation.			Observer.
					h	m	s	
1893 Apr. 20	Disapp. B.D. +27° No. 966	Astrographic Equat.	120	Dark	8	9	0·93	C. D.
20	,, B.D. +27° No. 966	3-in. Finder of Merz. Refractor	50	,,	8	9	1·02	D. E.
20	,, B.D. +27° No. 994	E. Equat.	70	,,	9	43	5·55	C. D.
21	,, 47 Geminorum	2½-in. Finder of E. Equat.	24	,,	9	17	35·21	H. T.
21	,, 47 Geminorum	Altaz.	100	,,	9	17	35·60	B.
21	,, 47 Geminorum	E. Equat.	...	,,	9	17	35·31	J.
21 (g)	,, W.B. (2) VII. 318	Altaz.	100	,,	12	39	9·00	B.
22	,, λ Cancri	E. Equat.	70	,,	12	34	53·22	A. C.
May 6	Reapp. b Sagittarii	,,	,,	,,	16	16	17·51	H.
18	Disapp. B.D. +27° No. 1,226	Astrographic Equat.	120	,,	8	53	22·80	C. D.
18	,, B.D. +27° No. 1,229	,,	,,	,,	9	8	20·74	,,
18	,, W.B. (2) VI. 1,192–3	,,	,,	,,	9	21	46·77	,,
18	,, B.D. +27° No. 1,237	,,	,,	,,	9	31	44·53	,,
27 (h)	,, B.D. −15° No. 3,862	,,	,,	,,	9	37	39·44	,,
June 20	,, B.D. +2° No. 2,499	,,	225	,,	10	13	27·71	H. F.
20	,, B.D. +2° No. 2,499	Altaz.	60	,,	10	13	27·98	C. D.
July 9 (i)	,, 32 Tauri	,,	100	Bright	13	37	14·84	B.
9	Reapp. 32 Tauri	,,	,,	Dark	14	27	29·93	,,
9	,, 32 Tauri	Astrographic Equat.	225	,,	14	27	29·78	A. E.

Day.	Phenomenon.	Telescope.	Power.	Moon's limb.	Mean Solar Time of Observation.	Observer.
					h m s	
1893 July 30	Reapp. 56 Aquarii	Astrographic Equat.	225	Dark	10 25 18·58	H. F.
Sept. 26 (j)	,, e Piscium	,,	,,	,,	7 11 1·47	,,
Oct. 19	Disapp. 37 Capricorni	E. Equat.	55	,,	9 3 22·84	B.
19	,, 38 Capricorni	Astrographic Equat.	225	,,	9 5 10·26	C. D.
25 (k)	,, 40 Arietis	E. Equat.	55	Bright	15 8 44·38	C. M.
30 (l)	Reapp. ω² Cancri	Altaz.	100	Dark	11 44 29·72	B.
30	,, ω² Cancri	E. Equat.	55	,,	11 44 29·47	C. D.
Nov. 22	Disapp. δ Arietis	,,	,,	,,	10 19 (36·54)	L.
22 (m)	,, δ Arietis	Astrographic Equat.	225	,,	10 19 46·80	H. F.
22	,, δ Arietis	Altaz.	100	,,	10 19 45·89	D. E.
Dec. 14	,, B.D.—14° No. 6,301	Astrographic Equat.	225	,,	5 42 29·97	C. D.

Notes.

(a) Limb distinctly seen.   (b) Difficult observation.

(c) The dark limb was quite visible and the star disappeared at above time, but there was a momentary flash about 10 secs. later, as though the star was seen through the limb.

(d) The star appeared to disappear behind limb at 10^h 31^m $48·5^s$, and was then repeatedly seen again as though through limb; it was last seen at above time.

(e) There was a cloud over the moon which had previously obscured the star; this is not considered a good observation; the star was difficult to see.   (f) Poor observation; very faint; cloudy.   (g) A very difficult observation.

(h) Not considered a good observation.   (i) Not considered a good observation.   (j) Limb nearly full, so probably a little late.

(k) Disappeared in blue rim of moon.   (l) A rough observation.   (m) Bright and instantaneous.

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Phenomena of Jupiter's Satellites.

Day.	Satellite.	Phenomenon.	Telescope.	Power.	Mean Solar Time of Observation. (h m s)	Mean Solar Time of N.A. (h m)	Observer.
1893 Jan. 2	III.	Tr. Ing. First contact	E. Equat.	200	8 35 53		A. C.
2	III.	Bisection	,,	,,	8 40 8	8 39	,,
2	III.	Last contact	,,	,,	8 43 12		,,
2	III. (a)	Tr. Ing. First contact	Astrographic Equat.	225	8 38 38		A. E.
2	III.	Bisection	,,	,,	8 42 7	8 39	,,
2	III.	Last contact	,,	,,	8 55 5		,,
3	I. (b)	Tr. Ing. First contact	,,	,,	9 0 47		C. D.
3	I.	Last contact	,,	,,	9 4 39	9 2	,,
19	I.	Tr. Ing. Bisection	Merz. Refractor	130	7 25 25		B.
19	I.	Last contact	,,	,,	7 29 58	7 24	,,
19	I.	Tr. Ing. Last contact	E. Equat.	200	7 28 58	7 24	T. H.
27	I. (c)	Occ. D. Bisection	Merz. Refractor	295	6 44 30		L.
27	I.	Last seen	,,	,,	6 45 10	6 43	,,
27	I. (d)	Occ. D. First contact	E. Equat.	200	6 40 24		H.
27	I.	Bisection	,,	,,	6 41 59		,,
27	I.	Last seen	,,	,,	6 44 33	6 43	,,
27	I. (e)	Occ. D. Last seen	Altaz.	100	6 44 19	6 43	B.
Feb. 4	I.	Tr. Ing. First contact	Merz. Refractor	285	5 50 15		L.
4	I.	Bisection	,,	,,	5 51 58	5 50	,,
4	I.	Last contact	,,	,,	5 54 14		,,